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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,535	10/07/2003	Christian Evers	M1211/20013	7471
3000	7590	02/22/2005	EXAMINER	
CAESAR, RIVISE, BERNSTEIN, COHEN & POKOTILOV, LTD. 11TH FLOOR, SEVEN PENN CENTER 1635 MARKET STREET PHILADELPHIA, PA 19103-2212			NGUYEN, HOAI AN D	
			ART UNIT	PAPER NUMBER
			2858	
DATE MAILED: 02/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,535

Applicant(s)

EVERS ET AL.

Examiner

Hoai-An D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10072003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to because of the following informalities: it recites the limitation "the mixer" in line 1, but there are more than one mixer recited in previous claims. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.
2. Claim 9 is objected to because of the following informalities: it appears that either "as" or "are" in line 3 should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Bockelman (US 5,751,153).

Bockelman teaches a method and apparatus for characterizing a multiport circuit comprising:

With regard to claim 1, a measuring device (FIG. 4, measurement system 400) comprising a plurality of excitation/receiving units (FIG. 4, test sets 430 and 440), wherein each of the excitation/receiving units comprising a port (FIG. 4, test ports 431, 432, 441, 442); at least one receiving apparatus (FIG. 4, test sets 430 and 440), and at least one oscillator (FIG. 4,

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voltage-controlled oscillator VCO), wherein: (a) the measuring device (FIG. 4, measurement system 400) is adapted to be connected by at least two ports (FIG. 4, test ports 431, 432, 441, 442) to a device under test; (b) at least one of the excitation/receiving units further comprises at least one signal generator (FIG. 4, signal generator 420) adapted to apply an excitation signal to the device under test; (c) each receiving apparatus has a mixer (FIG. 4, down mixers 439, 449) connected to an oscillator signal, and is adapted to receive the excitation signal, or the signal reflected from the associated port, or the signal transmitted to the associated port and convert said signal into an intermediate frequency signal, and (d) the at least one oscillator is separated from the signal generator and is adapted to produce the oscillator signal for the mixer of the receiving apparatus, whereby a frequency and/or a phase of the oscillator signal is adjustable independently of a frequency and/or a phase of oscillators of other excitation/receiving units (From column 4, line 38 to column 5, line 35).

With regard to claim 2, each of the excitation/receiving units (FIG. 4, test sets 430 and 440) has at least one signal generator (FIG. 4, signal generator 420), and the at least one signal generator is adapted to produce an excitation signal having a frequency and/or a phase adjustable independently of a frequency and/or a phase of the excitation signal of signal generators of other excitation/receiving units (Column 5, lines 7-35).

With regard to claim 3, frequency and/or the phase of the excitation signal of each signal generator (FIG. 4, signal generator 420) is/are adjustable independently of oscillator signal frequency and/or oscillator signal phase (FIG. 4, voltage-controlled oscillator VCO). Noted that the structure of FIG. 4 shows that signal generator 420 and voltage-controlled oscillators are working independently.

With regard to claim 4, each excitation/receiving unit comprises: (a) a first receiving apparatus (FIG. 4, circuit interface ports 431, 432, 441, and 442) with a first mixer (FIG. 4, down mixers 439, 449) adapted to receive a signal received by a port from the device under test, the signal having been reflected from the device under test or transmitted therethrough; and (b) a second receiving apparatus (FIG. 4, signal input port 435, 445) with a second mixer (FIG. 4, down mixers 439, 449) adapted to receive the excitation signal produced from the signal generator of the excitation/receiving unit (From column 4, line 50 to column 5, line 6).

With regard to claim 5, the mixer (FIG. 4, down mixers 439, 449) of each excitation/receiving unit is supplied with a common oscillator signal from a common oscillator (FIG. 4, voltage-controlled oscillator VCO) of the excitation/receiving unit (FIG. 4).

With regard to claim 6, oscillators (FIG. 4, voltage-controlled oscillator VCO) and/or signal generators (FIG. 4, signal generator 420) of different excitation/receiving units (FIG. 4, test sets 430 and 440) are connected through control lines that are either decentralized among each other, or centralized by way of a control unit (FIG. 4, controller 460), and through these control lines a frequency and/or phase synchronization takes place (FIG. 4 and from column 4, line 50 to column 5, line 6).

With regard to claim 7, the control lines (FIG. 4, control lines from controller 460 to test sets 430, 440 and signal generator 420) form a bus system.

With regard to claim 9, the excitation/receiving units are plug-in devices adapted to be inserted into a common housing in such variable numbers as are needed in accordance with a number of required ports (See structure of FIG. 3 or FIG. 4).

With regard to claim 11, the measurement device is a vectorial network analyzer (Column 2, lines 21-23).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bockelman in view of Grace et al. (US 5,191,294).

Bockelman teaches all that is claimed as discussed in the above rejections of claims 1-7, 9 and 11, but he does not specifically teach the following:

- The bus system is a LAN bus system.

However, Grace et al. teach a method of measuring noise figure and y-factor comprising:

- With regard to claim 8, the bus system (FIG. 3, GPIB bus 208) is a LAN bus system (Column 5, lines 24-30 and column 8, lines 3-13).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus for characterizing a multiport circuit of Bockelman to incorporate the teaching of a bus system being a LAN bus system taught by Grace et al. since Grace et al. teach that such an arrangement is beneficial for providing a conventional bus interface for communicating with the VNA as disclosed in column 5, lines 24-30.

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7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bockelman in view of a court decision about making separable according to MPEP § 2144.04, item V.

Bockelman teaches all that is claimed as discussed in the above rejections of claims 1-7, 9 and 11, but he does not specifically teach the following:

- The excitation/receiving units, as stand-alone units, are separated from a main housing and placed proximal to the device under test.

However, as discussed in MPEP § 2144, item V: In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961) (The claimed structure, a lipstick holder with a removable cap, was fully met by the prior art except that in the prior art the cap is "press fitted" and therefore not manually removable. The court held that "if it were considered desirable for any reason to obtain access to the end of [the prior art's] holder to which the cap is applied, it would be obvious to make the cap removable for that purpose."). Hence, the features upon which applicant relies (i.e., the excitation/receiving units, as stand-alone units, are separated from a main housing and placed proximal to the device under test) is not sufficient by itself to patentably distinguish over Bockelman.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus for characterizing a multiport circuit of Bockelman to incorporate the teaching of separating the excitation/receiving units, as stand-alone units, from a main housing and placing proximal to the device under test, since such an arrangement is to provide a preferably desirable configuration for an intended use of the system of Bockelman.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant's attention is invited to the followings whose inventions disclose similar devices.

- Wedge et al. (US 5,170,126) teach a microwave six-port noise parameter analyzer.
- Bottman et al. (US 5,633,801) teaches a pulse-based impedance measurement instrument.
- Karl et al. (US 6,590,399) teach measuring parameters of DUT at specified frequency using vector network analyzer.

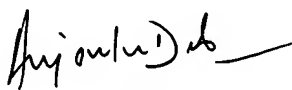
CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai-An D. Nguyen whose telephone number is 571-272-2170. The examiner can normally be reached on M-F (8:00 - 5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ANJAN DEB
PRIMARY EXAMINER

HADN

Hoai-An D. Nguyen
Examiner
Art Unit 2858
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